

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (Currently Amended): A Nd-Fe-B type rare earth magnet alloy for a Nd-Fe-B type anisotropic exchange spring magnet comprising:
hard magnetic phases and soft magnetic phases;
wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm ;
and a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm ; and
a composition of the Nd-Fe-B type rare earth magnet alloy is expressed by the following
chemical formula (1)



where x is within a range from 9 to 11, y is within a range from 5 to 8 and z is within a range from 0 to 2, wherein chemical formula (1) optionally comprises Co, and if Co is present in the alloy 0.01 to 30 atom% of Fe is replaced with Co.

2 (Canceled)

3 (Currently Amended): The Nd-Fe-B type rare earth magnet alloy as claimed in claim [[2]] 1, wherein 0.01 to 80 atom% of Nd is replaced with Pr.

4 (Currently Amended): The Nd-Fe-B type rare earth magnet alloy as claimed in claim [[2]] 1, wherein 0.01 to 10 atom% of Nd is replaced with Dy or Tb.

5 (Canceled)

6 (Currently Amended): The Nd-Fe-B type rare earth magnet alloy as claimed in claim [[2]] 1, wherein Fe or Co are replaced by at least one element selected from the group consisting

of Al, Mo, Zr, Ti, Sn, Cu, Ga and Nb, a summed amount of the at least one element being 0.1 to 3 atom% of a total amount of the Nd-Fe-B type rare earth magnet alloy.

7 (Original): The Nd-Fe-B type rare earth magnet alloy as claimed in claim 1, wherein the Nd-Fe-B type rare earth magnet alloy is a thin strip crystalline alloy produced by a strip casting method.

8 (Original): The Nd-Fe-B type rare earth magnet alloy as claimed in claim 7, wherein a thickness of the thin strip alloy is within a range from 30 to 300 μm .

9 (Currently Amended): Powder of a Nd-Fe-B type rare earth magnet alloy, the Nd-Fe-B type rare earth magnet alloy comprising:

hard magnetic phases and soft magnetic phases,
wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm ;
and a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm ; and
a composition of the Nd-Fe-B type rare earth magnet alloy is expressed by the following chemical formula (1)



where x is within a range from 9 to 11, y is within a range from 5 to 8 and z is within a range from 0 to 2, wherein chemical formula (1) optionally comprises Co, and if Co is present in the alloy 0.01 to 30 atom% of Fe is replaced with Co.

10 (Original): The powder as claimed in claim 9, wherein the powder is produced by pulverizing the Nd-Fe-B type rare earth magnet alloy by means of a ball mill.

11 (Original): The powder as claimed in claim 9, wherein the powder is heat treated within a range from 500 to 800 $^{\circ}\text{C}$.

12 (Withdrawn): A method of producing powder of a Nd-Fe-B type rare earth magnet alloy which comprises hard magnetic phases and soft magnetic phases wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm and a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm , the method comprising:

pulverizing the Nd-Fe-B type rare earth magnet alloy by means of a ball mill using a dispersant under a non-oxidation atmosphere.

13 (Withdrawn): The method as claimed in claim 12, wherein the ball mill is of a wet type.

14 (Withdrawn): The method as claimed in claim 12, wherein the ball mill is of a dry type.

15 (Withdrawn): A method of producing a Nd-Fe-B type anisotropic exchange spring magnet, comprising:

obtaining powder of a Nd-Fe-B type rare earth magnet alloy which comprises hard magnetic phases and soft magnetic phases wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm and a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm ;

obtaining a compressed powder body by compressing the powder at a compressing pressure ranging from 1 to 5 ton/cm² in a magnetic field ranging from 15 to 25 kOe; and

obtaining a bulk magnet by sintering the compressed powder body at a temperature ranging from 600 to 800 °C and at a compressing pressure ranging from 1 to 10 ton/cm² in a discharge plasma sintering unit.

16 (Withdrawn): The method as claimed in claim 15, wherein the powder is obtained by pulverizing the Nd-Fe-B type rare earth magnet alloy by means of a ball mill.

17 (Withdrawn): A Nd-Fe-B type anisotropic exchange spring magnet produced by a method of obtaining powder of a Nd-Fe-B type rare earth magnet alloy which comprises hard magnetic phases and soft magnetic phases wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm and a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm ; obtaining a compressed powder body by compressing the powder at a compressing pressure ranging from 1 to 5 ton/cm² in a magnetic field ranging from 15 to 25 kOe; and obtaining a bulk magnet by sintering the compressed powder body at a temperature ranging from 600 to 800 °C and at a compressing pressure ranging from 1 to 10 ton/cm² in a discharge plasma sintering unit.

18 (Withdrawn): The Nd-Fe-B type anisotropic exchange spring magnet as claimed in claim 17, wherein a density of the anisotropy exchange spring magnet is 95% of a true density of a magnet alloy having a composition as same as that of the anisotropic exchange spring magnet.

19 (Withdrawn): A motor comprising:

a Nd-Fe-B type anisotropic exchange spring magnet produced by a method of obtaining powder of a Nd-Fe-B type rare earth magnet alloy which comprises hard magnetic phases and soft magnetic phases wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm and a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm , obtaining a compressed powder body by compressing the powder at a compressing pressure ranging from 1 to 5 ton/cm² in a magnetic field ranging from 15 to 25 kOe, and obtaining a bulk magnet by sintering the compressed powder body at a temperature ranging from 600 to 800 °C and at a compressing pressure ranging from 1 to 10 ton/cm² in a discharge plasma sintering unit.

20 (Currently Amended): A Nd-Fe-B type rare earth magnet alloy for producing a bulk of a Nd-Fe-B type anisotropic exchange spring magnet, comprising:
hard magnetic phases and soft magnetic phases;
wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm ;
and a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm ; and
a composition of the Nd-Fe-B type rare earth magnet alloy is expressed by the following chemical formula (1)



where x is within a range from 9 to 11, y is within a range from 5 to 8 and z is within a range from 0 to 2, wherein chemical formula (1) optionally comprises Co, and if Co is present in the alloy 0.01 to 30 atom% of Fe is replaced with Co.